

APPLICANT(S): Roman VITTEMBERG
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IN THE SPECIFICATION

Kindly replace the paragraph on Page 2 that begins with the words “Fig. 1 illustrates”, with the following paragraph:

-- Fig. 1 illustrates the frequency band allocation plan for the DSL system in accordance with ITU regulation. A *“Plain Old Telephone Service”* (POTS) occupies voice frequency band **101** up to a frequency of 4 kHz. An Asymmetric Digital Subscriber Line (ADSL) uses digital multitone (DMT) line signals for communication between subscriber equipment and the central office (CO) of the telephone station. ADSL equipment of the CO transmits downstream data by modulation of about 200 tones in frequency band **105** from 200 kHz to 1100 kHz and receives about 30 tones of upstream data in frequency band **103** from 28 kHz to 140 kHz. ADSL systems are able to transmit downstream data with speeds of up to 10 Mb/s and upstream data with speeds of up to 1 Mb/s. ADSL was specially developed for long cable lines ~~with length~~ of up to 4.5 km in length.--

Kindly replace the paragraph on Page 9 that begins with the words “In accordance with a further embodiment...”, with the following paragraph:

--In accordance with a further embodiment of the invention, the SP comprises one or more N.LITE set-top boxes that may communicate, through the home network, with other N.LITE set-top boxes using the ADSL upstream frequency band. An N.LITE ~~set-up_top~~ box comprises, by in one embodiment, an N.LITE modem and an RF (radio frequency) transceiver, which supports radio communication with many different home devices including, for example, an air conditioners, lighting devices, electronic locks, door closures, and others.--

Kindly replace the paragraph on Page 11 that begins with the words “In accordance with another embodiment...”, with the following paragraph:

--In accordance with another embodiment of the invention, the SP comprises one or more N.LITE ~~set-top~~ boxes, each of which is coupled to the subscriber telephone line. Each N.LITE

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set-top box comprises an N.LITE modem and a RF transceiver, to permit radio communication with a number of different devices and mechanisms within the SP. --

Kindly replace the paragraph on Page 14 that begins with the words "If in state..." , with the following paragraph:

--If in state **505** the control tone is not received, the NDSL modem enters state **509**. If a PC is asking for communication, the NDSL modem enters state **531**; if not – the modem goes back to standby state **503**. In state **531**, the NDSL modem is connected to the telephone line, with upstream transmission being enabled, and then enters state **533** in which control tone transmission is initiated to inform any other device that the line is busy. In a subsequent state **535**, the nature of communication needed by the PC is defined. In the case of communication with another NDSL modem **537**, information about the I.D. number of the modem is transmitted (state **539**), and then NDSL modem enters state **513** to enable ADSL upstream receiver. In the case of communication with CO **209**-(**YES2**), the standard ADSL duplex protocol may be used and the modem may operate in an FDM mode. Otherwise, the modem enters state **547** in which it asks the PC whether the communication cycle has ended. If the communication cycle has ended, the modem switches to state **523**. If not, it switches to ADSL transmission/receiving state **545**.--

Kindly replace the paragraph on Page 15 that begins with the words "The high speed NDSL modem ..." , with the following paragraph:

--The high speed NDSL modem **605** comprises a universal ADSL/VDSL upstream transmitter and an ADSL downstream receiver for communication with the ADSL office modem, and an ADSL upstream receiver, a VDSL upstream receiver and a control tone receiver for home data network communication. The universal ADSL/VDSL transmitter can transmit **DTM-DMT** signals only in the ADSL upstream frequency band **103** for communication with the ADSL office modem, as well as in the VDSL upstream frequency bands **111** and **113** for communication with other high speed NDSL modems within the subscriber's premises. –

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Kindly replace the paragraph on Page 16 that begins with the words "Reference is now made...", with the following paragraph:

--Reference is now made to Fig. 8 showing a system **801** in accordance with another embodiment of the invention. Here again, like components to those of previous figures have been given like reference numerals and the reader is referred to the description above for an explanation of their nature and function. In this embodiment, the subscriber premises **203** comprises VDSL-ready NDSL modems **805**. Modem **805** permits communication with the standard ADSL office equipment **211** as well as with VDSL office equipment **811**, which may replace the ADSL office equipment **211** in the future. Furthermore, similar to the case of modems **305** and **605**, modem **805** also permits communication with other NDSL modems **805**, as well as with modems **605** or **305** within the subscriber's premises. Modem **805** may use line signals and communication protocols in accordance with existing ADSL standards (T1E1.413 or ITU G.992.1). Communication with CO ADSL equipment **211** may be similar to the case of modems **305** or **605**. In case of communication with VDSL office equipment **811**, modem **805** may transmit upstream data with a bit rate of up to 28 Mb/s and may receive downstream data with a bit rate of up to 50 Mb/s. When communicating in the VDSL mode, modem **805** may use line signals in communication protocols of existing VDSL standards. --

Kindly replace the paragraph on Page 17 that begins with the words "A block diagram of a ...", with the following paragraph:

--A block diagram of a VDSL-ready NDSL modem **805** is shown in Fig. 9. Like components to those of modems **305** and **605** shown in Figs. 4 and 6 have like reference numerals. This modem is similar to modem **605** with the main difference being the addition of the VDSL downstream receiver **453**. Otherwise, its structure and mode of operation are similar to those of modem **605** and in this connection the reader is referred to the description above. --

Kindly replace the paragraph on Page 18 that begins with the words "A multipoint NDSL system ...", with the following paragraph:

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-- A multipoint NDSL system **1201** in accordance with another embodiment of the invention can be seen in Fig. 12. In this embodiment, one of N.LITE modems **1005** is included within an NDSL set-up top box **1205** which also comprises also an RF transceiver **1207** for controlling, through transmission of radio signals, of a number of mechanical and electrical devices in the home.

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